

---

---

कॉस्मेटिक उद्योग के लिए  
मूंगफली का तेल — विशिष्टि  
( पहला पुनरीक्षण )

Groundnut Oil for  
Cosmetic Industry — Specification  
( First Revision )

ICS 71.100.70

© BIS 2021



भारतीय मानक ब्यूरो  
BUREAU OF INDIAN STANDARDS  
मानक भवन, 9 बहादुरशाह ज़फर मार्ग, नई दिल्ली – 110002  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI-110002  
[www.bis.gov.in](http://www.bis.gov.in) [www.standardsbis.in](http://www.standardsbis.in)

## FOREWORD

This Indian Standard (Second Revision) was adopted by the Bureau of Indian Standards after the draft finalized by the Cosmetics Sectional Committee had been approved by the Petroleum, Coal and Related Products Division Council.

This standard was first published in 1985. The first revision has been taken up to keep pace with the latest technological developments. Now a days, the groundnut oil of new varieties (with better intrinsic quality of groundnut oil) having higher oleic acid content is available in the Indian market. Due to which the oleic acid content of groundnut oil has increased and linoleic acid content has decreased, significantly affecting the iodine value of the oil. Therefore, in this revision, the iodine value range has been changed from '85–99' to '77–107'. Further, amendment No. 1 (July 2004) to the previous version has been incorporated in this revision. An optional requirement of Total Aflatoxin has been added as 25 ppb, max and is determined using High Performance Liquid Chromatography (HPLC).

The composition of the Committee responsible for formulation of this standard is given at Annex C.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated expressing the result of a test or analysis shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values ( *revised* )'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

# Indian Standard

## GROUNDNUT OIL FOR COSMETIC INDUSTRY — SPECIFICATION

( *First Revision* )

### 1 SCOPE

**1.1** This standard prescribes the requirements and the methods of sampling and test for groundnut oil for cosmetic industry.

**1.2** For groundnut oil for edible purposes and for manufacture of *VANASPATHI* and refined oil a separate standard, IS 544 : 2014 'Groundnut oil — Specification (*third revision*)' has been published.

### 2 REFERENCES

**2.1** The standards listed below contain provisions which, through reference in this text, constitute provisions of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards listed below.

<i>IS No.</i>	<i>Title</i>
548 (Part 1) : 1964	Methods of sampling and test for oils and fats: Part 1 Sampling, physical and chemical tests ( <i>revised</i> )
548 (Part 2) : 1976	Methods of sampling and test for oils and fats: Part 2 Purity test ( <i>third revision</i> )
1448 (Part 21) : 2012/ ISO 2719 : 2016	Methods of test for petroleum and its products: Part 21 Determination of flash point — Pensky-Martens closed cup method ( <i>third revision</i> )
3470 : 2017	Hexane, Food Grade — Specification ( <i>second revision</i> )
IS 16287 :2015/ ISO 16050 : 2003	Foodstuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products

### 3 TYPES

The groundnut oil shall be of following two types:

- a) *Type 1* — Refined oil, and
- b) *Type 2* — Raw expeller oil.

### 4 REQUIREMENTS

#### 4.1 Description

**4.1.1** *Type 1* — The groundnut oil shall be obtained from clean and sound groundnut (*Arachis hypogea* Linn., fam. Leguminosae) or good quality groundnut cake by a process of expression or solvent extraction using solvent hexane conforming to IS 3470. The oil shall be refined by neutralisation with alkali, bleached with bleaching earth or activated carbon or both, and deodorised with steam. The oil shall be practically odourless or having a very mild odour characteristic of groundnut oil.

**4.1.2** *Type 2* — The groundnut oil shall be obtained from clean and sound groundnut (*Arachis hypogea* Linn., fam. Leguminosae) by a process of expression. The oil shall have the characteristic odour of groundnut oil.

**4.2** The groundnut oil shall be clear and free from rancidity, adulterants, sediment, suspended and other foreign matter, separated water and added colouring and flavouring substances.

**4.3 Admixture with Other Oils** — The groundnut oil shall be free from admixture with other oils when tested according to the methods prescribed in IS 548 (Part 2).

**4.4** The groundnut oil shall not contain Total Aflatoxins, more than 25 µg/kg, when tested by the method prescribed in 16287 : 2015/ISO 16050 : 2003 Food stuffs — Determination of aflatoxin B1, and the total content of aflatoxins B1, B2, G1 and G2 in cereals, nuts and derived products. The test for Total Aflatoxin shall be performed if agreed to between the purchaser and the supplier.

**4.5** The groundnut oil shall also comply with the requirements given in Table 1.

**Table 1 Requirements for Groundnut Oil for Cosmetic Industry**  
( Clauses 4.4 )

Sl No.	Characteristic	Requirements		Method of Test, Ref to
		Type 1	Type 2	
(1)	(2)	(3)	(4)	(5)
i)	Moisture and insoluble impurities, percent by mass, <i>Max</i>	0.10	0.20	5 and 6 of IS 548 (Part 1)
ii)	Colour in a 1'' cell on the Lovibond scale, expressed as (Y + 5R) not deeper than	3	15	13 of IS 548 (Part 1)
iii)	Acid value, <i>Max</i>	0.5	2.0	7 of IS 548 (Part 1)
iv)	Flash point, Pensky-Martens (closed), °C, <i>Min</i>	250	—	IS 1448 (Part 21)
v)	Peroxide value, meq/kg, <i>Max</i>	5.0	10.0	Annex A
vi)	Refractive index at 40 °C	1.4620 to 1.4640		10 of IS 548 (Part 1)
vii)	Specific gravity at 30°/30 °C	0.909 to 0.913		11 of IS 548 (Part 1)
viii)	Saponification value	188 to 196		15 of IS 548 (Part 1)
ix)	Iodine value (Wij's)	77 to 107		14 of IS 548 (Part 1)
x)	Unsaponifiable matter, percent by mass, <i>Max</i>	1.0		8 of IS 548 (Part 1)
xi)	Bellier turbidity temperature test, °C	38 to 41		13 of IS 548 (Part 2)
xii)	Test for rancidity	To pass the test		Annex B

## 5 PACKING AND MARKING

**5.1** The groundnut oil shall be supplied in suitable well-closed containers, which do not deteriorate the product, in quantities, as agreed to between the purchaser and the supplier.

**5.2** The packages shall be securely closed and legibly marked with the following information:

- Name and type of the material;
- Manufacturer's name and/or his recognised trade-mark, if any;
- Net quantity of groundnut oil in the container;
- Batch number, month and year of manufacture;
- Caution 'NOT FOR DIRECT EDIBLE CONSUMPTION' (either printed on the label affixed to the container or lithographed or stenciled thereon with indelible ink) in a type size of not less than 50 mm to be marked; and
- Any other information required by statutory authorities.

### 5.2.1 BIS Certification Marking

The product(s) conforming to the requirements of this standard may be certified as per the conformity

assessment schemes under the provisions of the *Bureau of Indian Standards Act, 2016* and the Rules and Regulations framed thereunder, and the products may be marked with the Standard Mark.

## 6 SAMPLING

**6.1** Representative samples of the groundnut oil shall be drawn as prescribed under 3 of IS 548 (Part 1).

**6.2** Tests for all the requirements shall be carried out on a composite sample.

**6.3** The material shall be taken to have conformed to this standard if the composite sample passes all the tests. The test for total aflatoxin is an optional test and shall be performed if agreed to between the purchaser and the supplier.

## 7 QUALITY OF REAGENTS

Unless specified otherwise, pure chemicals and distilled water [*see* IS 1070 : 1992 Reagent grade water — Specification (*third revision*)] shall be employed in the tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the result of analysis.

## ANNEX A

[ Table 1, Sl No. (v) ]

## DETERMINATION OF PEROXIDE VALUE

## A-1 REAGENTS

## A-1.1 Glacial Acetic Acid

## A-1.2 Chloroform

## A-1.3 Saturated Potassium Iodide Solution

**A-1.4 Sodium Thiosulphate** — 0.01 N, accurately standardized.

## A-2 PROCEDURE

Weigh  $5.0 \pm 0.5$  g of the sample in a 250 ml glass-stoppered conical flask. Add 30 ml of a mixture of 3 volumes glacial acetic acid and 2 volumes of chloroform. Swirl until dissolved, and add 0.5 ml of saturated potassium iodide solution. Allow to stand for exactly 1 min, with occasional shaking, add 30 ml of water. Titrate gradually, with continuous and vigorous shaking, with 0.01 N sodium thiosulphate solution until the yellow colour almost disappears.

Add 0.5 ml of starch solution, continue the titration, shaking vigorously until the blue colour just disappears (*A*). Carry out a blank determination under the same condition without adding any sample (*B*). The volume of 0.01 N sodium thiosulphate in the blank determination must not exceed 0.1 ml.

## A-3 CALCULATION

Calculate the peroxide value from the expression:

$$\text{Peroxide value (meq/kg)} = \frac{(A - B)N}{M} \times 1000$$

where

*A* = volume in ml, of sodium thiosulphate solution required for titration;

*B* = volume in ml, of sodium thiosulphate solution required for blank titration;

*N* = normality of sodium thiosulphate solution; and

*M* = mass in g, of the sample.

## ANNEX B

[ Table 1, Sl No. (xii) ]

## TEST FOR RANCIDITY

## B-1 REAGENTS

**B-1.1 Phloroglucinol Solution** — Dissolve 0.1 g of phloroglucinol in 100 ml of diethyl ether.

## B-2 PROCEDURE

Shake 10 ml of the material, melt if necessary, with 10 ml of concentrated hydrochloric acid and 10 ml of phloroglucinol solution. Shake for 1 min.

**B-2.1** The material shall be taken to have passed the test if no pink colour develops.

## ANNEX D

( Foreword )

## COMMITTEE COMPOSITION

Cosmetics Sectional Committee, PCD 19

<i>Organization</i>	<i>Representative(s)</i>
Drugs Controller General (INDIA), Delhi	DR V. G. SOMANI ( <b>Chairman</b> )
All India Cosmetic Manufacturers Association, Mumbai	MS KAJAL ANAND DR VIRENDRA V. CHAVAN ( <i>Alternate</i> )
Chemstar Limited, Mumbai	SHRI SUNIL JOSHI
Cavinkare Private Limited, Chennai	DR T. KUMAR DR GIREESH KUMAR ( <i>Alternate I</i> ) DR S. SANKAR KALIDAS ( <i>Alternate II</i> )
Central Drugs Standard Control Organization (CDSCO), Delhi	DR S. P. SHANI
Central Drugs Testing Laboratory (CDTL), Chennai	MS C. VIJAYA LAKSHMI DR J. UMA MAHESWARI ( <i>Alternate</i> )
Consumer Voice, New Delhi	SHRI H. WADHWA
CSIR Indian Institute of Toxicological Research, Lucknow	DR A. B. PANT DR R. S. RAY ( <i>Alternate</i> )
Central Drugs Testing Laboratory (CDTL), Mumbai	DR RAMAN MOHAN SINGH SHRIMATI S. U. WARDE ( <i>Alternate I</i> ) SHRIMATI SUJATA S. KAISARE ( <i>Alternate II</i> )
Colgate Palmolive (India) Limited, Mumbai	DR MANAS V. VYAS SHRIMATI SHRUTI HARDIKAR ( <i>Alternate I</i> ) SHRI PURUSHOTTAM JADHAV ( <i>Alternate II</i> )
Consumer Guidance Society of India, Mumbai	DR SITARAM DIXIT DR M. S. KAMATH ( <i>Alternate</i> )
Dabur India Limited, Sahibabad	DR PRASUN BANDYOPADHYAY DR S. K. LUTHRA ( <i>Alternate I</i> ) SHRI SHIVAJI RAI ( <i>Alternate II</i> )
Directorate of Food and Drugs Administration, Goa	MS JYOTI J. SARDESSAI
Drugs Control Department, Delhi	SHRI A. K. NASA SHRI K. R. CHAWLA ( <i>Alternate</i> )
Envisbe Solutions Pvt Limited, Mumbai	SHRI BENEDICT M. MASCARENHAS
Essential Oil Association of India (EOAI), Noida	SHRI AJAY K. JAIN
Food Safety and Drug Administration, Lucknow	DR ANITA BHATNAGAR JAIN SHRI DINESH KUMAR TIWARI ( <i>Alternate</i> )
Food and Drugs Control Administration Gujarat, Gandhinagar	DR H. G. KOSHIA SHRI V. R. SHAH ( <i>Alternate</i> )
Food and Drugs Administration Haryana, Panchkula	SHRI NARENDER KUMAR AHOOJA SHRI MANMOHAN TANEJA ( <i>Alternate</i> )
Food and Drugs Administration Maharashtra, Mumbai	SHRI O. S. SADHWANI
Fragrance and Flavours Association of India, (FAFAI), Mumbai	SHRI HASMUKH PATEL

<i>Organization</i>	<i>Representative(s)</i>
Galaxy Surfactants Limited, Mumbai	SHRI R. K. SINGH SHRI SAGAR TRAILOKYA ( <i>Alternate I</i> ) SHRI PRAMOD SABAT TRAILOKYA ( <i>Alternate II</i> )
Godrej Consumers Products Limited, Mumbai	MS RUPINDER KAUR RAWAT DR MANOJ GAUR ( <i>Alternate</i> )
Hindustan Lever Limited (HUL), Mumbai	MS VRINDA RAJWADE
Hygienic Research Institute Private Limited, Mumbai	DR JAYASHREE ANAND SHRI MANOJ SARKAR ( <i>Alternate</i> )
Indian Pharmacopoeia Commission (IPC), Ghaziabad	DR ANIL KR TEOTIA DR MANOJ KR PANDEY ( <i>Alternate</i> )
ITC R & D Centre, Bengaluru	DR GURUBASAVARAJA KM DR JAMES BHASKAR ( <i>Alternate I</i> ) DR JOHN BOSCO STANISLAUS ( <i>Alternate II</i> )
Indian Beauty and Hygiene Association (IBHA), Mumbai	MS MALATHI NARAYANAN
Johnson and Johnson Limited, Mumbai	DR DILIP TRIPATHI SHRI RAJNEESH KUMAR ( <i>Alternate</i> )
Kelkar Education Trusts (KETS) Scientific Research Centre, Mumbai	DR S. S. BARVE
Loreal India Private Limited, Mumbai	MS VEENA BALGI MS RUPALI TURAKHIYA ( <i>Alternate</i> )
Marico Limited, Mumbai	DR MITALI HEDGE DR SUDHAKAR MHASKAR ( <i>Alternate I</i> ) SHRI PRABODH S. HALDE ( <i>Alternate II</i> )
Mikasa Cosmetics Limited, Ahmedabad	MS TRUPTI PATEL
Ministry of Micro, Small and Medium Enterprises (MSME), Delhi	DR ARUN KUMAR DR IZZATULLAH ( <i>Alternate</i> )
Ministry of AYUSH, Delhi	DR D. C. KATOCH
Procter and Gamble, Mumbai	SHRI GIRISH PARHATE
PETA India, Mumbai	SHRI MANILAL VALLIYATE MS DIPTI M. KAPOOR
The Himalaya Drug Company, Bengaluru	DR SUNDARAM RAMACHANDRAN DR KRISHNAN SRIRAMAN ( <i>Alternate</i> )
Voluntary Organization In Interest of Consumer Education (VOICE), Delhi	DR M. A.U. KHAN
Bureau of Indian Standards, Jammu	SHRIMATI NISHA BURA
BIS Directorate General	SHRIMATI NAGAMANI T., SCIENTIST 'E' AND HEAD (PCD) [REPRESENTING DIRECTOR GENERAL ( <i>Ex-officio</i> )]

*Member Secretary*

SHRIMATI D. UMA  
SCIENTIST 'D' (PCD), BIS

## Composition of Raw materials Subcommittee, PCD 19: 1

<i>Organization</i>	<i>Representative(s)</i>
The Himalaya Drug Company, Bengaluru	DR SUNDARAM RAMACHANDRAN ( <b>Convener</b> )
BASF India Limited, Mumbai	SHRI UDAY KULKARNI SHRI VIPUL BHATT ( <i>Alternate</i> )
Central Drug Testing Laboratory, Kolkata	SHRI HARIHARAN
Central Drugs Testing Laboratory, Chennai	SHRIMATI C. VIJAYA LAKSHMI DR J. UMA MAHESWARI ( <i>Alternate</i> )
Chemstar Limited, Thane	SHRI SUNIL JOSHI
Consumer Education and Research Centre, Ahmedabad	DR C. J. SHISHOO SHRI H. S. TRIPATHI ( <i>Alternate</i> )
Dabur India Limited, Sahibabad	DR S. K. LUTHRA SHRI PRASUN BANDYOPADHYAY ( <i>Alternate I</i> ) SHRI SHIVAJI RAI ( <i>Alternate II</i> )
Drugs Testing Laboratory, Thiruvananthapuram	SHRI SUTHA T. SHRI LINEX D. SILVA ( <i>Alternate</i> )
Food and Drug Administration, Mumbai	SHRI K. B. SHENDE
Food and Drugs Laboratory, Vadodara	SHRI H. B. CHAUDHARI SHRI K. N. PATEL ( <i>Alternate</i> )
Galaxy Surfactants Limited, Mumbai	SHRI R. K. SINGH SHRI SAGAR TRAILOKYA ( <i>Alternate I</i> ) SHRI PRAMOD SABAT ( <i>Alternate II</i> )
Godrej Consumer Products Limited, Mumbai	DR RUPINDER KAUR RAWAT DR MANOJ GAUR ( <i>Alternate</i> )
Hindustan Unilever Limited, Mumbai	DR VRINDA RAJWADE
ITC Life Sciences and Technology Centre, Bengaluru	DR JOHN BOSCO STANISLAUS SHRI GURUBASAVARAJA K. M. ( <i>Alternate I</i> ) DR JAMES BHASKAR ( <i>Alternate II</i> )
Indian Pharmacopoeia Commission, Ghaziabad	DR ANIL KR TEOTIA DR MANOJ KUMAR PANDEY
Johnson and Johnson Private Limited, Mumbai	DR DILIP TRIPATHI SHRI RAJNEESH KUMAR ( <i>Alternate</i> )
Loreal India Private Limited, Mumbai	MS VEENA BALGI MS RUPALI TURAKHIYA ( <i>Alternate</i> )
Paxchem Limited, Mumbai	SHRI ASHOK PATHARE
Procter and Gamble India, Mumbai	SHRI GIRISH PARHATE
Sudarshan Chemical Industries Limited, Pune	SHRI S. H. HARSULE SHRI M. D. METTELLOO ( <i>Alternate</i> )





## Bureau of Indian Standards

BIS is a statutory institution established under the *Bureau of Indian Standards Act, 2016* to promote harmonious development of the activities of standardization, marking and quality certification of goods and attending to connected matters in the country.

### Copyright

BIS has the copyright of all its publications. No part of these publications may be reproduced in any form without the prior permission in writing of BIS. This does not preclude the free use, in the course of implementing the standard, of necessary details, such as symbols and sizes, type or grade designations. Enquiries relating to copyright be addressed to the Director (Publications), BIS.

### Review of Indian Standards

Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Catalogue' and 'Standards: Monthly Additions'.

This Indian Standard has been developed from Doc No.: PCD 19 (12954).

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

## BUREAU OF INDIAN STANDARDS

### Headquarters:

Manak Bhavan, 9 Bahadur Shah Zafar Marg, New Delhi 110002  
Telephones: 2323 0131, 2323 3375, 2323 9402

Website: [www.bis.gov.in](http://www.bis.gov.in)

### Regional Offices:

Telephones

Central	: Manak Bhavan, 9 Bahadur Shah Zafar Marg NEW DELHI 110002	{ 2323 7617 2323 3841
Eastern	: 1/14 C.I.T. Scheme VII M, V.I.P. Road, Kankurgachi KOLKATA 700054	{ 2337 8499, 2337 8561 2337 8626, 2337 9120
Northern	: Plot No. 4-A, Sector 27-B, Madhya Marg CHANDIGARH 160019	{ 265 0206 265 0290
Southern	: C.I.T. Campus, IV Cross Road, CHENNAI 600113	{ 2254 1216, 2254 1442 2254 2519, 2254 2315
Western	: Manakalaya, E9 MIDC, Marol, Andheri (East) MUMBAI 400093	{ 2832 9295, 2832 7858 2832 7891, 2832 7892

**Branches :** AHMEDABAD. BENGALURU. BHOPAL. BHUBANESHWAR. COIMBATORE.  
DEHRADUN. DURGAPUR. FARIDABAD. GHAZIABAD. GUWAHATI.  
HYDERABAD. JAIPUR. JAMMU. JAMSHEDPUR. KOCHI. LUCKNOW.  
NAGPUR. PARWANOO. PATNA. PUNE. RAIPUR. RAJKOT. VISAKHAPATNAM.

Published by BIS, New Delhi